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Childhood Maltreatment and Depression: The Role of Emotion Regulation and Irrational Beliefs

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Abstract

Numerous factors contribute to the relationship between childhood maltreatment and depressive symptoms in later life, with emotion dysregulation being a key component. This study explored the mediating role of difficulties in emotion regulation and irrational beliefs in the relationship between childhood maltreatment and depressive symptoms. The Childhood Trauma Questionnaire (CTQ), Beck Depression Inventory (BDI), Difficulties in Emotion Regulation Scale (DERS-16), and the Shortened General Attitude and Belief Scale (SGABS) were administered to a total of 354 participants aged 18-61. Structural equation modeling (SEM) was employed to test several models. The initial model proposed that the link between childhood maltreatment and depression symptoms would be mediated by difficulties in emotion regulation and irrational beliefs. The results indicated that irrational beliefs did not fit the data and showed no significant relationship with depression, leading to its removal from the model. In subsequent models, the mediating role of emotion regulation difficulties in the relationship between the subscales of the CTQ and depression symptoms was examined. Emotion regulation difficulties were found to fully mediate the relationship between depression symptoms and emotional abuse, sexual abuse, and physical abuse, while partially mediating the relationship between depression symptoms and the neglect subscales. Results highlight the importance of understanding the multiple mechanisms involved in adult depressive symptomatology.

Keywords: *Childhood maltreatment, depressive symptoms, emotion regulation, irrational thinking.*

Öz

Çocukluk dönemi istismar ve ihmali ile yaşamın ilerleyen dönemlerindeki depresif belirtiler arasındaki ilişkiye, duygu düzenleme zorlukları da dahil olmak üzere birçok faktör etki eder. Bu çalışmada, duygu düzenleme güçlükleri ve irrasyonel düşünmenin çocukluk dönemi kötü davranımı ile depresyon belirtileri arasındaki ilişkiyi aracılık edip etmediği araştırılmıştır. Çalışmaya 18-61 yaşları arasında toplam 354 katılımcı katılmıştır. Çocukluk Çağı Travmaları Ölçeği (CTQ), Beck Depresyon Envanteri, Duygu Düzenleme Güçlüğü Ölçeği (DERS-16) ve Kısaltılmış Genel Tutum ve İnanç Ölçeği (SGABS) kullanılmıştır. Tasarlanan modelleri test etmek için yapısal eşitlik modellemesi (SEM) kullanılmıştır. İlk modelde, çocukluk dönemi kötü davranımı ile depresyon belirtileri arasındaki ilişkide, duygu düzenleme güçlükleri ve akıldışı inançların aracılık edeceği varsayılmıştır. Bulgular, akıldışı inançların (Kısaltılmış Genel Tutum ve İnanç Ölçeği) verilerle uyumlu olmadığını ve depresyonla olan ilişkisinin anlamlı olmadığını göstermiş ve modelden çıkarılmıştır. Model, çocukluk dönemi istismar ve ihmali ile depresyon belirtileri arasındaki ilişkiye kısmen aracılık eden duygu düzenleme güçlükleri ile test edilmiştir. Diğer modellerde, CTQ alt ölçekleri ile depresyon belirtileri arasındaki ilişkide duygu düzenleme güçlüklerinin aracı rolü test edilmiştir. Duygu düzenleme güçlükleri, depresyon belirtileri ile duygusal istismar, fiziksel istismar ve cinsel istismar arasındaki ilişkiye tam aracılık ederken, ihmal alt ölçekleri ile depresyon belirtileri arasındaki ilişkiye kısmen aracılık etmiştir. Sonuçlar, yetişkinlerdeki depresif belirtileri anlamak ve etkili müdahaleler tasarlayabilmek için birden fazla mekanizmanın anlaşılmasının kritik olduğunu göstermektedir.

Anahtar Kelimeler: *Çocukluk dönemi istismarı, kötü davranım, depresyon belirtileri, duygu düzenleme, akıldışı inançlar*

Introduction

Childhood maltreatment is a critical risk factor for adverse psychological outcomes, including emotion regulation difficulties and depression. Maltreatment and related risks may hinder the emotional development of children, depriving them of the opportunity to learn how to regulate their emotions (Jennissen et al., 2016). Household dysfunction, including parental conflict and instability (Negriff, 2019), parental depression and negative affect (Kohl et al., 2011; Smith, et al., 2014), creates a risk for childhood maltreatment. Emotion regulation is defined as the awareness, understanding, and acceptance of emotions, the ability to control impulsive behaviors when negative emotions arise, and the use of appropriate emotion regulation strategies that help individuals act in line with situational requirements and personal goals (Gratz & Roemer 2004). Studies highlight the critical role of emotion regulation in mitigating the adverse effects of childhood trauma, particularly in fostering resilience and addressing maladaptive emotional patterns. Research has shown that childhood emotional maltreatment can disrupt emotion regulation processes by contributing to increased aggression and emotional dysregulation through maladaptive schemas (Ertürk et al., 2018). These maladaptive schemas not only exacerbate emotional challenges but also underscore the importance of developing effective emotion regulation strategies as a means of fostering resilience. Recent studies further support this dynamic, revealing culturally relevant patterns in how emotion regulation mediates the relationship between trauma and resilience (Tanacıoğlu Aydın & Pekşen Süslü, 2023).

Many mental health problems appear to be characterized by difficulties in emotion regulation (Werner & Gross, 2010), and that these dysfunctional emotion regulation strategies are associated with more long-term and severe depressive symptomatology, particularly in the face of stressful life events (Aldao, et al., 2010; Mennin & Farach, 2007; Stikkelbroek et al., 2016).

Childhood Maltreatment, Emotion Regulation, and Mental Health Outcomes

Numerous studies indicate that, exposure to maltreatment during formative years disrupts emotional, cognitive, and social development, often leading to negative psychological outcomes such as depression and anxiety (Baldwin et al., 2023), as well as risk-taking and aggression in young adults (Odacı & Çelik, 2020). Research consistently shows that early adverse experiences can alter brain development and emotion regulation, increasing vulnerability to mental health problems throughout the lifespan. A history of childhood trauma is consistently found to be related particularly to depression and anxiety in adulthood (Afifi et al., 2006; Crow et al., 2014; Gibb et al., 2007) as well as in adolescence (Elkins et al., 2019). Although risk of depression is higher among females, emotional abuse was found to have the strongest impact on lifetime and recent depression, in both females and males (Chapman et al., 2004). Considering the severity and duration, experiencing multiple types of adverse childhood experiences increases the risk and severity of mental health problems including depression, panic attack, generalized anxiety disorder and also alcohol or substance abuse (Chapman et al., 2004).

Another factor affecting emotional distress may be beliefs about managing emotions. Individuals who believe that they cannot efficiently regulate their emotions, tend to avoid emotional experiences, particularly negative ones, and find emotion-evoking situations threatening and worrisome and use cognitive and behavioral avoidance strategies (Brockmeyer et al., 2012; Castella et al., 2018). They may also believe that they lack other alternative strategies or do not possess self-efficacy necessary to use other more positive emotion regulation strategies (Castella et al., 2018). As a result, individuals may default to less effective strategies due to a perceived lack of options or confidence in their ability to manage emotions effectively. In terms of functionality of emotion regulation strategies, Gross & John (2003) distinguished between two types of emotion regulation strategies, namely antecedent-focused emotion regulation strategies which occur before an emotional response is fully

activated, and response-focused emotion regulation strategies occurring after an emotional response is fully generated. Cognitive reappraisal is considered an antecedent-focused strategy which affects how people experience, share with others and express negative emotions by reinterpreting the stressful event and making an effort to positively improve emotions. Individuals who successfully employ cognitive reappraisal are more likely to form close relationships in which they share both negative and positive emotions, their overall well-being is supported with high life satisfaction and self-esteem and also show less depressive symptoms. On the other hand, suppression is recognized as a response-focused strategy that only helps inhibit of behaviorally expressing negative emotions, by suppressing and concealing feelings and does not help in reducing the experiencing of negative emotions. Individuals using suppression seem to experience more negative emotions and less positive emotions, are less accepting of their emotions which they find unfavorable, have trouble in understanding and dealing with negative mood. They are reluctant to forming close relationships, are emotionally aloof, have problems in forming positive relations with others and refrain from sharing both negative and positive emotions. These individuals show lower levels of self-esteem, are dissatisfied with their lives, find themselves inauthentic, and also have more depressive symptoms while ruminating extensively about negative events (Gross & John, 2003). As a result, individuals who use antecedent-focused emotion regulation strategies show a lower risk for depression, whereas those who use response-focused strategies show higher levels of depressive symptoms.

The use of emotion regulation strategies may not be fixed, and individuals who use mixed strategies may show less emotional distress compared to those who rely solely on maladaptive strategies. For example, individuals using adaptive strategies such as acceptance, cognitive reappraisal, and problem-solving, but who also exhibit high levels of rumination, did not experience psychological distress, suggesting that positive strategies compensated for maladaptive strategies. The opposite may also happen. Acceptance, which is considered a healthy emotion regulation strategy, when used with suppression, was found to be related to significantly more psychological distress, suggesting that suppression may weaken adaptive outcomes (Chesney et al., 2019).

Individuals with a history of ACEs (adverse childhood experiences) may exhibit poor emotion regulation skills (Pasha-Zaidi et al., 2020), avoiding or inhibiting emotional experiences and expressions later in life (Krause et al., 2003). When the association between a history of childhood trauma, mental health, and emotion regulation skills was investigated, maltreatment and depressive symptoms were found to be negatively related to adaptive cognitive emotion regulation strategies (Huh et al., 2017). In particular, individuals who were emotionally abused and neglected used more emotion-focused coping, which in turn was associated with an increase in psychiatric symptoms (Sheffler et al., 2019). They were vulnerable to stress and relied more on suppression instead of reappraisal as an emotion regulation strategy when dealing with stressful life events (Hong et al., 2018).

There are similar findings in research conducted with adolescent populations. Emotion dysregulation and depressive symptoms increased with the severity of maltreatment (Peh et al., 2017), and internalizing problems, including depression, were found to be predicted by maladaptive emotion regulation strategies such as rumination, catastrophizing, lack of positive reappraisal, self-blame, and blaming others, whereas positive refocusing was found to be a negative predictor of depression (Garnefski et al., 2005; Öngen, 2010).

Irrational Beliefs and Mental Health

According to Rational Emotive Behavior Therapy (REBT), an individual's perceptions and cognitions about events and experiences define whether these events and experiences are considered stressful. Irrational beliefs are rigid, extreme, false, illogical, and lead to psychological disturbances and problems in interpersonal relationships. They also result in low frustration tolerance, involve biased and inaccurate generalizations and conclusions,

whereas rational beliefs are realistic, logical, flexible, consistent, and helpful (Dryden & Ellis, 2003). Depression, anxiety, anger, hurt, guilt, shame, and envy are among the feelings included in the psychological aspects of stress. According to this view, irrational beliefs are an important part of emotional and behavioral problems (Ellis et al., 1997), and aiming to change irrational beliefs as part of treatment, REBT has been shown to be efficient in the treatment of depression as well as anxiety, stress, aggressive behavior, and in helping with self-esteem problems (Xu & Liu, 2017; Gonzalez et al., 2004).

It is well documented that irrational thinking is related to mental health problems, including depression, anxiety, somatization, and stress levels (Dryden et al., 2010; Terán et al., 2020; Thyer et al., 2010), as well as traumatic stress symptoms (Crumpei, 2014). Additionally, irrational beliefs were negatively related to self-acceptance (Vasile, 2012), interpersonal relationships, self-reliance, and positive relations with parents (Terán et al., 2020).

Moreover, the role of irrational beliefs in linking childhood trauma and emotional dysregulation has also been investigated, emphasizing their relevance in understanding psychological distress (Duru & Balkıs, 2021). These findings underscore the importance of considering both emotion regulation and irrational beliefs as mechanisms in the pathways from childhood adversity to depression. Other studies show that, in terms of traumatic childhood experiences, maladaptive beliefs were found to be related to ACEs (Berman, 2017), childhood neglect was associated with irrational beliefs (Hwang & Lee, 2010), and negative automatic thoughts mediated the relationship between history of childhood maltreatment and depression (Hou et al., 2020

The Present Study

The goal of this study is to explore mechanisms and outcomes associated with childhood maltreatment, particularly its potential role in increasing the risk of depressive symptoms. Research suggests that children's emotional regulation is strongly influenced by their relationships with caregivers. Problematic parental relationships may lead to poor emotional regulation skills and irrational beliefs, which, in turn, could contribute to a higher frequency of depressive symptoms. It was hypothesized that difficulties in emotion regulation and irrational beliefs would mediate the relationship between childhood maltreatment and depressive symptoms. To test this, three mediation analyses were conducted: one using the total score for childhood maltreatment and two separate analyses examining the abuse subscales (emotional abuse, physical abuse, and sexual abuse) and the neglect subscales (emotional neglect and physical neglect). Child abuse and neglect reflect distinct experiences with unique dynamics and psychological consequences. Abuse involves active harmful behaviors, while neglect reflects an absence of adequate care and attention, and it is believed that these differences may influence how they contribute to depressive symptoms (Perrin-Miller & Perrin, 2013). By analyzing abuse and neglect separately, it was aimed to reveal how emotion regulation difficulties specifically mediate the pathways from each form of maltreatment to depressive symptoms. Furthermore, this approach allows for the identification of specific dynamics and potential non-mediations, which could suggest that certain types of maltreatment influence depressive outcomes through different mechanisms.

Method

Participants and Procedure

The sample included 354 participants (280 females and 74 males), aged between 18 and 65 (mean age = 29.93, SD = 11.91). Age groups were distributed as follows: 50.3% aged 18–24, 22.9% aged 25–38, 18.6% aged 39–52, and 6% aged 53–65, with 2% missing data. Most participants were university students (57.6%), followed by master's or PhD graduates (21.8%), university graduates (14.4%), and high school graduates (5.6%). The majority (72%) were single, while 26.8% were married, with 4 participants not reporting their marital status.

Data were collected through online questionnaires distributed via Google Forms. The forms included an introduction to the study, researcher

contact information, and informed consent. The researcher shared the forms with personal contacts and university students, who further distributed them to their networks.

Measures

History of Childhood Maltreatment: The Childhood Trauma Questionnaire (CTQ), developed by Bernstein et al. (1994), was used to assess participants' history of abuse and neglect during childhood. It consists of 28 items rated on a 5-point scale and covers five subscales: physical abuse, sexual abuse, emotional abuse, physical neglect, and emotional neglect. Higher scores indicate greater experiences of abuse and neglect. Cronbach's alpha reliability for the total scale in this study was 0.79. Cronbach's alpha values for the subscales are as follows: emotional abuse (items 3, 8, 14, 18, 25), 0.85; physical abuse (items 9, 11, 12, 15, 17), 0.87; sexual abuse (items 20, 21, 23, 24, 27), 0.87; physical neglect (items 1, 4, 6, 2, 26), 0.50; and emotional neglect (items 5, 7, 13, 19, 28), 0.86.

The Turkish standardization study, carried out by Şar, Öztürk, and İkikardeş (2012), reported a Cronbach's alpha coefficient of 0.93 for the overall scale. In the current study, the Cronbach's alpha for the entire scale is 0.79.

Depression Symptom Frequency: Depression symptoms were measured using the Beck Depression Inventory (BDI; Beck et al., 1979), a 21-item self-report scale assessing symptoms over the past week. The scale ranges from 0 (no symptom) to 3 (severe symptom), with an internal consistency of 0.92. In this study, the Cronbach's alpha was 0.89. The Turkish standardization study was carried out by Hisli (1989), who reported an internal consistency of 0.80. The Cronbach's alpha for the present study is 0.89

Difficulties in Emotion Regulation: Difficulties in regulating emotions were assessed with the brief version of the Difficulties in Emotion Regulation Scale (DERS-16; Bjureberg et al., 2016), a 16-item self-report tool. The DERS-16 consists of five subscales excluding the "awareness of emotional responses" dimension from the original version (Gratz & Roemer, 2004). The items reflect difficulties in four dimensions which are acceptance of emotions, the ability to engage in goal-directed behavior and refrain from impulsive behavior when experiencing negative emotions, use of emotion regulation strategies perceived as effective, which include modulating emotional responses in a flexible way to meet situational demands, and awareness and understanding of emotions.

The Turkish standardization study was carried out by Yiğit & Yiğit (2017), with Cronbach's alpha coefficients for the subscales ranging from 0.80 to 0.91. In the current study, the Cronbach's alpha is 0.95.

Irrational Beliefs: Irrational beliefs were measured using the Shortened General Attitude and Belief Scale (SGABS; Lindner et al., 1999), a 5-point self-report scale. The scale measures irrational thinking through seven subscales, including one for rational thinking and six for irrational beliefs (self-downing, other-downing, need for achievement, need for approval, need for comfort, demand for fairness). The internal consistency of the subscales ranges from 0.79 to 0.84.

The Turkish standardization study was conducted by Urfa & Urfa (2019), with Cronbach's alpha coefficients for the subscales ranging from 0.72 to 0.91. In the current study, the Cronbach's alpha is 0.90.

Research Model

Structural equation modeling (SEM) was utilized to examine whether emotional regulation and irrational beliefs serve as mediators in the connection between childhood maltreatment and depressive symptoms. The proposed model is presented in Figure 1.

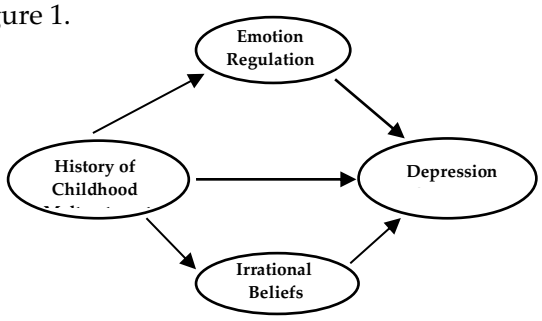

Figure 1. Research Model

Data Analyses

Descriptive statistics and Pearson's correlation coefficients were calculated for the study variables. Missing data were identified from the demographic form. Outliers were detected, resulting in the exclusion of 6 participants from the dataset. Normality tests were conducted for the total scores of all questionnaires. For the BDI, item parceling was applied to create observed variables, as the scale does not include subtests. Pearson's correlation coefficients were calculated using the total scores to assess the relationships between latent variables for constructing a measurement model. Initially, the measurement model was evaluated, and the model fit indices confirmed a reflective measurement model, indicating that the latent variables influenced the measurement of the indicator variables in the current dataset.

Two models were tested: the first with CTQ as the independent variable, BDI as the dependent variable, and DERS-16 and SGABS as mediators; the second with CTQ subscales as independent variables and DERS-16 as the mediator.

Data analysis was conducted using SPSS 25.0 and LISREL 8.80.

Results

Scale means are given in Table 1.

Table 1. Mean Scores of CTQ, DERS-16, SGABS, and BDI

Variables	n	$\bar{X}$	SD
CTQ	354	46.31	9.11
EA	354	7.44	3.48
PA	354	5.76	2.13
SA	354	5.79	2.01
EN	354	10.57	4.55
PN	354	6.78	2.30
DERS-16	354	35.25	13.14
SGABS	354	72.50	15.52
BDI	354	11.64	8.40

Correlations among the latent variables, as shown in Table 2, indicate that childhood trauma, emotion regulation difficulties, irrational beliefs, and depression symptoms are positively and significantly correlated.

Table 2. Correlations Between CTQ, DERS-16, SGABS, and BDI

		CTQ	DERS-16	SGABS	BDI
1.	CTQ	-			
2.	DERS-16	0.44*	-		
3.	GABS	0.35*	0.69*	-	
4.	BDI	0.44*	0.69*	0.54*	-

*$p< 0.01$

Through structural equation modeling, it was determined whether the relationship between childhood maltreatment and depressi symptoms was mediated by emotion regulation and irrational beliefs (shown in figure 2). The structural model, which incorporated the SGABS which measured irrational beliefs, did not adequately fit the data ($\chi 2/df = 668.22/165$, $p < 0.05$, RMSEA = 0.09, SRMR = 0.11, CFI = 0.88, GFI = 0.84). Moreover, when SGABS was included as a mediator, its relationship with the dependent variable (BDI) was not statistically significant, necessitating the removal of SGABS from the model.

With the exclusion of irrational beliefs, measured by SGABS, the model was further tested through a single mediator, which was emotion regulation measured by DERS. Measurements indicated that the structural model fit the data well ($\chi 2/df = 200.66/62$ $p < 0.05$, GFI = 0.92, RMSEA = 0.08, CFI = 0.97, SRMR = 0.057). Goodness-of-fit indices [$\chi 2$, the goodness of fit index (GFI), the root mean square error of approximation (RMSEA), the comparative fit index (CFI), and the standardized root mean square residual (SRMR)] were utilized to evaluate how well the hypothesized model matched the actual data. The fit statistics for this model demonstrated that it was a good fit for the present data 0.90 or bigger for GFI and CFI; 0.08 or lower for SRMR and RMSEA).

In the structural model, the standardized coefficients representing the relationships between latent variables were significant. The path from CTQ

to DERS-16, showed a significant correlation (ß = 0.55, p < 0.05). Similarly, the path from DERS-16 to BDI was also significant (ß = 0.65, p < 0.05). The direct path from CTQ to BDI (ß = 0.17, p < 0.05) remained significant, suggesting DERS-16 partially mediated the relationship between CTQ and BDI.

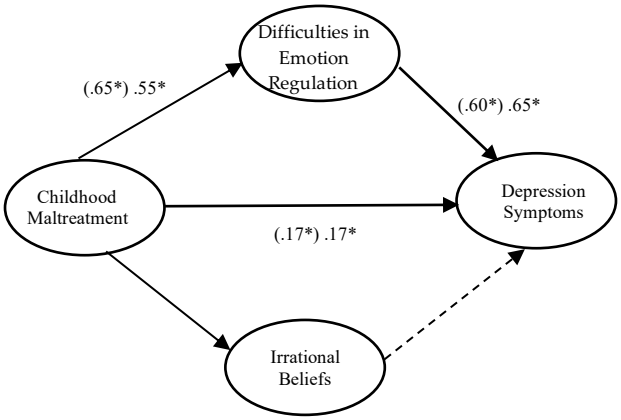

Figure 2. Structural equation model CTQ, BDI, with DERS-16 as a mediator

Three structural models were tested to examine whether DERS-16 mediated the relationship between the three subscales of the Childhood Trauma Questionnaire measuring abuse (emotional abuse, physical abuse, and sexual abuse) and BDI. Each model fits the data well.

Emotional abuse model: The fit indices demonstrated a good fit (χ^2/df = 192.02/62, p < .05, GFI=.92, RMSEA=.08, CFI=.98, SRMR=.042). Physical abuse model: The fit indices demonstrated a good fit (χ^2/df = 150.09/62, p < .05, GFI=.94, RMSEA=.06, CFI=.98, SRMR=.059). Sexual abuse model: The fit indices demonstrated a good fit as well (χ^2/df = 151.82/62, p < .05, GFI=.94, RMSEA=.06, CFI=.98, SRMR=.041).

Results show that the relationship between BDI, and the three subscales of CTQ [emotional abuse (ß= 0.09, p> 0.05), physical abuse (ß= -0.02, p> 0.05), and sexual abuse (ß= 0.04, p> 0.05)] was fully mediated by DERS-16 (see figure 3).

Finally, two additional models were tested to evaluate whether DERS-16 mediated the relationship of the two neglect subscales of CTQ (emotional neglect and physical neglect) and BDI. Both models demonstrated a good fit with the data.

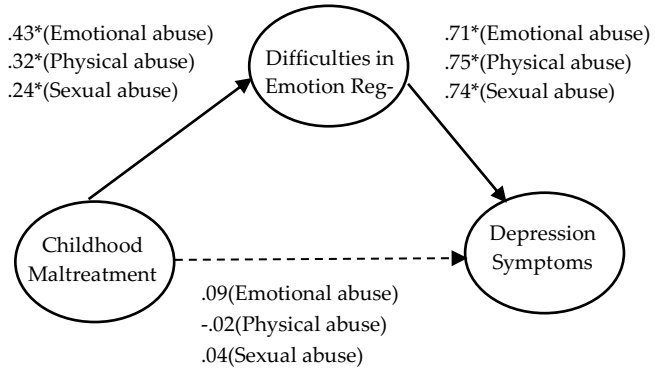

Figure 3. Structural equation model CTQ abuse subscales, BDI, with DERS-16 as a mediator

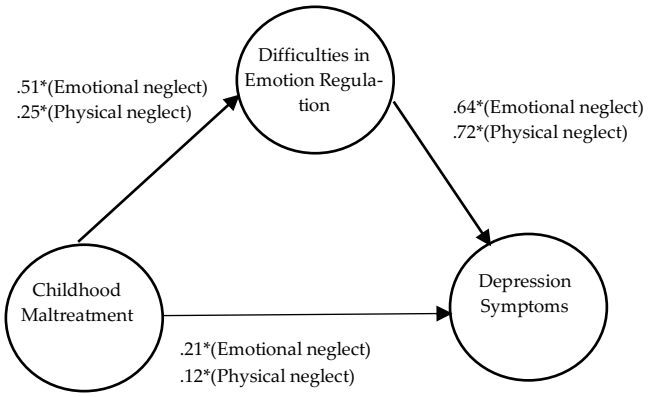

Figure 4. Structural equation model CTQ neglect subscales, BDI, with DERS-16 as a mediator

Emotional neglect model: The fit indices demonstrated a good fit (χ^2/df = 135.83/62, p < .05, GFI=.94, RMSEA=.06, CFI=.99, SRMR=.043). Physical neglect model: The fit indices demonstrated a good fit (χ^2/df = 148.12/62, p < .05, GFI=.94, RMSEA=.06, CFI=.98, SRMR=.041).

When the mediating effect of DERS-16, in the relationship between BDI and the CTQ-emotional neglect and CTQ- physical neglect subscales were tested, the relationships between BDI and both neglect subscales remained significant, indicating partial mediation. As shown in Figure 4, DERS-16 partially mediated the relationship between BDI and emotional neglect (ß = 0.21, p < 0.05) as well as physical neglect (ß = 0.12, p < 0.05).

Discussion

The current study explores mechanisms linking childhood maltreatment to depressive symptoms through the roles of emotion dysregulation and irrational thoughts, contributing to the growing literature on how these cognitive and emotional processes mediate the effects of adverse childhood experiences. Research has consistently demonstrated that childhood maltreatment, particularly emotional abuse and neglect, is associated with significant impairments in emotion regulation and an increased risk for depression. Difficulties in emotion regulation have been identified as a key mechanism linking maltreatment to depressive outcomes. Studies show that individuals with a history of maltreatment are more likely to use maladaptive emotion regulation strategies, such as rumination and emotional suppression, which exacerbate depressive symptoms (Gruhn & Compas, 2020). Additionally, maltreatment disrupts the development of adaptive regulation strategies like cognitive reappraisal, reducing resilience against depressive symptoms (Rodman et al., 2019). Relatedly, irrational beliefs may play an important role in this process, potentially developing in response to negative parental behaviors. These beliefs may reinforce emotional vulnerabilities and create a cycle of maladaptive responses, further predisposing individuals to depression.

To explore these relationships, a mediation model was tested to examine whether emotion regulation difficulties and irrational thinking mediated the association between childhood maltreatment and depressive symptom frequency. Additionally, two separate models were employed to investigate the mediating role of emotion regulation difficulties: the first examined the relationship between depression and the abuse subscales (emotional, physical, and sexual), while the second explored the association between depression and the neglect subscales (emotional and physical).

Results indicated that the direct association between childhood maltreatment, depression symptoms, and emotion regulation difficulties were strong, indicating a partial mediation of emotion regulation difficulties on the relationship between childhood maltreatment and symptoms of depression. However, for irrational thinking, the mediation model did not fit the data, and no significant association was found between depression and irrational thinking, indicating that irrational thinking was not supported as a mediator in the model.

In the models examining subscales, emotion regulation difficulties fully mediated the relationship between emotional abuse, physical abuse, sexual abuse, and depressive symptoms. This finding suggests that emotion dysregulation is a key mechanism through which abuse subtypes influence depressive outcomes. In terms of neglect subscales, emotion dysregulation partially mediated the relationship between emotional neglect, physical neglect and symptoms of depression. Thus, results provide support for partial mediation of emotion regulation difficulties on the relationship between childhood neglect and depressive symptoms.

The cumulative effects of childhood maltreatment amplify difficulties in emotion regulation, making emotion dysregulation a critical target for interventions aimed at mitigating the psychological effects of childhood adversity (Humphreys et al., 2020). Emotion regulation plays a central role in mediating this relationship, as early adversity disrupts emotional development, leading to maladaptive regulation strategies such as rumination, emotional suppression, and heightened emotional reactivity (Su et al., 2019).

These difficulties in emotion regulation increase vulnerability to depression, as individuals are less able to manage negative emotions and recover from stress effectively (Chandan et al., 2019). Research also highlights that experiencing multiple forms of maltreatment exacerbates emotion regulation difficulties, compounding the risk for depression (Kisely et al., 2018). By exploring the interplay between childhood maltreatment, depression, and emotion regulation, this study contributes to understanding the pathways through which adverse experiences impact mental health, offering insights for targeted interventions.

Research consistently shows that experiencing multiple forms of maltreatment is associated with more severe depressive outcomes, emphasizing the importance of disentangling how specific types

of maltreatment contribute to mental health vulnerabilities (Kamal et al., 2022; Medeiros et al., 2020). Among these, emotional maltreatment stands out as uniquely associated with recurrent depressive episodes and heightened risk for post-traumatic stress disorder (PTSD), demonstrating its enduring and significant psychological impact (Vallati et al., 2020). These findings highlight the importance of exploring diverse pathways, such as emotion regulation difficulties and cognitive distortions, through which childhood adversity increases the risk for depression. Previous research supports the central role of maladaptive emotion regulation strategies in this process. Findings suggest that childhood trauma significantly impacts emotion regulation and identity development, contributing to psychopathology (Dereboy et al., 2018) and maladaptive emotion regulation strategies further mediate the relationship between childhood trauma and depressive symptoms (Alpay et al., 2017; Huh et al., 2017).

In this study, the complete mediation of emotion regulation difficulties for the abuse subscales, highlights the central role of disrupted emotional processes in shaping depressive symptoms. Emotional abuse may exert its influence through emotion dysregulation, often accompanied by feelings of rejection and helplessness (Maciejewski & Mazure, 2006; Zelkowitz & Cole, 2016). These findings emphasize the significance of interventions aimed at enhancing emotion regulation skills to reduce vulnerability to depressive outcomes.

Contrary to expectation, in the first model, the mediating effect of irrational thinking on the relationship between childhood maltreatment and depressive symptoms was not supported. While previous research has identified associations between irrational beliefs and depression (Chan & Sun, 2020; Taghavi et al., 2006), limited evidence connects irrational beliefs directly to childhood maltreatment. For instance, Kocturk and Bilge (2017) found no significant difference in irrational beliefs between individuals with and without a history of childhood sexual abuse. Conversely, Duru and Balkıs (2021) identified irrational beliefs as mediators between childhood trauma and depression, suggesting that these beliefs may play an indirect or context-specific role. In the present study, correlation analysis indicate that irrational thoughts are in fact related to all study variables and especially with emotion regulation difficulties (r=0.69). Also irrational thoughts and depression symptoms showed a strong correlation (r=0.54) supporting prior research and indicating a relationship between these variables, although the mediation model was not supported. One possible explanation is that while irrational beliefs may be influenced by a history of maltreatment, its role as a mediator may be secondary to, or interwoven with emotion regulation difficulties, thus the mediating role of these beliefs in the context of childhood maltreatment may be less direct. Early adverse experiences are well-documented to disrupt emotional development and adversely affect the ability to regulate emotions (Gruhn & Compas, 2020; Milojevich et al., 2020; Snyder et al., 2023). These immediate emotional processes may overshadow cognitive mechanisms like irrational beliefs in directly mediating the link between maltreatment and depressive outcomes. However, this does not mean that irrational beliefs are not influenced by maltreatment; rather, they may manifest their effects through more complex, indirect pathways, or in combination with other factors. Future research could explore these dynamics using moderated mediation models to better capture the interactions between cognitive and emotional mechanisms. For instance, individuals with stronger irrational beliefs about self-worth or approval-seeking, may be more vulnerable to developing depressive symptoms when they also struggle with emotion regulation. Alternatively, such beliefs may amplify the impact of emotion regulation difficulties, leading to more severe depressive outcomes.

Measurement limitations may also have contributed to the lack of a mediating effect in this study. Even though the sample characteristics of the present study are in part similar to Duru and Balkıs (2021), such as higher number of females and undergraduate students, the present study also includes high-school and master/PhD graduates which yields a more mixed sample. A major reason may be due to differences of the scales used to assess irrational thoughts. Internal consistency

was quiet high in the original study and in the present study (0.90), for which reason internal consistency doesn't strike out as a probable reason. The SGABS assesses general irrational beliefs and may not capture trauma-specific cognitive distortions. For instance, beliefs such as 'I am unlovable' or 'The world is unsafe,' which are commonly associated with maltreatment, may be more directly linked to depressive patterns (Chung & Shakra, 2020; Valdez et al., 2021). Including tools designed to measure these trauma-specific beliefs could yield different results and provide a clearer picture of how irrational beliefs mediate or interact with other factors.

Lastly, it is important to consider developmental and contextual factors. For instance, irrational beliefs might emerge later in life as maladaptive responses to unresolved emotional difficulties stemming from childhood maltreatment. In such cases, these beliefs might contribute to chronic or recurrent depressive symptoms, but their mediating role would be less apparent in models examining current symptoms of depression. As the diathesis-stress model of depression implies, these individuals may be vulnerable, but significant stressors may be lacking at a particular time period. Longitudinal studies help clarify these temporal dynamics and provide further insights into how cognitive and emotional factors evolve over time to influence depressive outcomes.

In conclusion, while this study did not find support for irrational beliefs as mediators in the relationship between childhood maltreatment and depressive symptoms, this finding underscores the importance of examining both the immediate impact of emotional disruptions and the gradual emergence of cognitive patterns to better understand the psychological consequences of childhood adversity. The results suggest that emotional dysregulation may play a more direct and central role in this pathway, while irrational beliefs might influence depressive outcomes in more complex or indirect ways.

Overall, these results suggest that troubled relationships with parents, and related adverse effects, may create negative, traumatic experiences and hinder children from forming adaptive ways of dealing with emotions. The intergenerational transmission of childhood maltreatment, in which a parental history of maltreatment adversely affects parenting skills, may create a risk for both direct childhood abuse and a chaotic household. This environment can indirectly prevent the child from learning healthy ways of experiencing and expressing emotions. The projection of early childhood experiences, in which the child was led to believe that they were helpless, not in control, and that negative emotions were unacceptable—or when the child was neglected and never had the opportunity to understand their feelings and emotionality—cumulates throughout adolescent and adult life, also affecting relationships with others. Furthermore, parents' overly critical and demanding attitudes, insensitivity, and unresponsiveness toward their children's needs may lead children to believe that they possess some inherent flaw that makes them unworthy of love and attention (Coates & Messman-Moore, 2014). This belief can culminate in maladaptive emotion regulation strategies, such as suppression or experiential avoidance, which are linked to higher vulnerability to depressive symptoms (Calam et al., 2002; Smith et al., 2014; Warmingham et al., 2011; Schierholz et al., 2016).

In such a household, parents may model hostility, verbal aggression, and low stress tolerance instead of healthy emotion regulation strategies. Parents' suppression of their emotions during interactions has been shown to negatively impact the quality of parent-child interactions, increasing stress transmission to children and reducing engagement and warmth within these relationships (Waters et al., 2020). Furthermore, studies shed light on how suppressive parenting styles may inadvertently foster children's use of maladaptive emotion regulation strategies, such as rumination and emotional suppression (Waters et al., 2020). These dynamics can reflect a bidirectional relationship, wherein children's maladaptive responses to parental behaviors exacerbate parental stress or emotional dysregulation, creating a feedback loop of negative emotional interactions (Chan et al., 2023). Such cycles underscore the centrality of emotion regulation in shaping not only individual psychological outcomes but also the quality of parent-child relationships.

Similarly, parental expressed emotion (EE), including criticism and emotional over-involvement, predicts greater depressive symptoms in children, with youth-reported EE emerging as a key mediator in this process (Berla et al., 2021). Parental behaviors characterized by criticism, inconsistency, or excessive control can further disrupt children's emotional development by fostering maladaptive cognitive appraisals that exacerbate emotional and psychological challenges (Berla et al., 2021). However, studies indicate that adaptive strategies such as cognitive reappraisal, when modeled by parents, can significantly buffer children against depressive symptoms (Kneeland et al., 2016). Interventions targeting such positive behaviors have shown promise in promoting resilience and emotional well-being. On the other hand, parents' collaborative coping strategies, which involve engaging positively with their children's emotional needs, have been associated with better emotional adjustment and more secure attachment patterns in children. Conversely, negative parental reactions to children's emotional expressions, such as minimizing or punitive responses, are linked to internalizing and externalizing problems and insecure attachment patterns (Waslin et al., 2022).

Given the importance of beliefs about emotions and how they are processed, these beliefs profoundly influence how struggles in life are managed (Leahy, 2015). Individuals who believe that they can manage and shape their emotions experience less negative affect and more cognitive reappraisal when faced with emotionally upsetting events (Kneeland et al., 2016). Relatedly, negative self-beliefs resulting from traumatic childhood experiences may lead to feelings of helplessness and the belief of failing to cope with emotionally demanding and challenging life events, which in turn may result in emotion dysregulation (Coates & Messman-Moore, 2014).

In sum, the present study and several aforementioned studies reveal a relationship between childhood maltreatment, maladaptive emotion regulation strategies, and depression. One explanation is that traumatic experiences related to childhood maltreatment, when not adaptively processed, result in trauma-related cognitions, emotional and/or physiological reactivity related to reminders of trauma, which maintain or trigger depressive symptomatology. Another alternative explanation is that the link between childhood maltreatment and depression is mediated through emotion regulation, wherein the development of emotion-regulation is impaired on emotional, cognitive, psychobiological, and interpersonal levels as a result of childhood maltreatment, creating a risk for future depression. In this case, emotion regulation skills should be a target in counseling and psychotherapy (Schierholz et al., 2016).

Conclusion and Practical Implications

Identifying the factors related to childhood maltreatment is crucial in preventing possible unfavorable outcomes, including mental health problems, and in planning interventions when risks arise within the family environment. Not all individuals react to adverse childhood experiences in the same way. Differences may arise from factors such as genetics, temperament, how adverse experiences are validated and interpreted, and the presence of supportive social and emotional relationships or encounters. These individual differences shape the unique responses each person exhibits when faced with distressing events and emotions, which can either amplify or mitigate the detrimental effects of maltreatment.

Children who grow up in environments where their needs and emotions are not accepted are invalidated, criticized, humiliated, or even ridiculed, may learn to avoid and repress their emotions. This avoidance can lead to *experiential avoidance*, defined as the unwillingness to remain in contact with particular memories, emotions, thoughts, bodily sensations, and/or behavioral predispositions. The individual may attempt to alter the form or frequency of these experiences or the contexts in which they occur (Hayes et al., 1996). Maladaptive emotion regulation strategies, such as experiential avoidance, formed and sometimes reinforced throughout life, influence how individuals perceive, evaluate, and assign meaning to emotionally arousing situations. These strategies also shape interactions with others.

As adults, individuals who have developed these dysfunctional emotion regulation strategies may struggle to connect with their emotions, become aware of them, or express them. They may also feel discomfort when others express emotions, which can hinder their ability to respond appropriately, form, and maintain close and intimate relationships. These established patterns can intensify negative emotions, lead to missed social and emotional opportunities, and create barriers to experiencing emotions in depth. Consequently, individuals may struggle to fully connect with themselves, their inner experiences, and their external relationships, preventing them from living authentic and fulfilling lives. Such disconnection may further contribute to depressive moods (Hayes et al., 2006). Given these outcomes, identifying and fostering adaptive emotion regulation strategies during counseling is essential for managing emotional distress.

Clinicians and counselors play a pivotal role in addressing these challenges. A clear understanding of how individuals assess emotions and respond, particularly in stressful or upsetting situations or during major life events, can guide treatment plans and support individuals throughout counseling. Understanding the multiple and interacting mechanisms and belief systems underlying depressive symptomatology can help psychotherapists and counselors uncover the core needs of clients. This, in turn, allows for the design of effective, targeted interventions. Emotion dysregulation is also widely recognized as a risk factor for developing mental health problems, including depression. As previously noted, stressful life events can impair the formation of adaptive emotion regulation skills, perpetuating an ongoing cycle of emotional distress (Abravanel & Sinha, 2015; Qian et al., 2022). Consequently, encouraging the use of effective emotion regulation strategies is a critical step toward improving mental health outcomes (Boggio et al., 2019; LeBlanc et al., 2017).

The fact that findings from this Turkish sample align with previous research conducted in other cultural contexts underscores the cross-cultural dimensions of these factors and their interrelationships. By contributing to a deeper understanding of how childhood maltreatment, depressive symptoms in adulthood, and emotion regulation strategies intersect across cultures, the present study highlights the universal relevance of addressing emotion regulation in therapeutic settings.

Limitations and suggestions for future research

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design precludes any causal inferences about the relationships between childhood maltreatment, emotion regulation, and mental health outcomes. Future research employing longitudinal designs would provide stronger evidence for causal pathways and help elucidate the temporal dynamics of these relationships.

Second, the reliance on self-report measures introduces the potential for bias, including social desirability and inaccuracies due to participants' introspective abilities. The use of multiple methods, such as clinical interviews, observational data, or physiological measures, in conjunction with self-reports, could enhance the reliability and validity of findings.

Third, the sample predominantly comprised young, highly educated females, which limits the generalizability of the results to more diverse populations. Future studies should aim to recruit more heterogeneous samples, including individuals from varying socioeconomic backgrounds, age groups, genders, and cultural contexts. Additionally, the inclusion of clinical samples, such as individuals formally diagnosed with depression, anxiety, or other psychological disorders, would enhance understanding of how childhood maltreatment impacts emotion regulation and mental health in clinical populations.

Fourth, the study focused primarily on the participants' subjective experiences without integrating objective measures or corroborating perspectives, such as reports from family members or therapists. Incorporating such perspectives could provide a more holistic view of the dynamics under investigation.

Finally, while the study identified broad associations, it did not delve into the specific mecha-

nisms or processes underlying the observed relationships. Future research could benefit from employing in-depth, open-ended interviews to uncover the nuanced dynamics of how childhood maltreatment influences mental health outcomes. Additionally, experimental studies could explore the efficacy of targeted interventions aimed at improving emotion regulation skills in individuals with histories of childhood maltreatment.

By addressing these limitations, future research can provide a more comprehensive understanding of the interplay between childhood maltreatment, emotion regulation, and mental health, contributing to more effective prevention and intervention strategies.

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